

Engineer, Family Injured in Fatal Auto Accident

Alex Lessig, Engineer in the Relay Group, returned to work October 19, from two week's recuperation after surviving a spectacular head-on collision near Madras Oct. 6, in which his wife, Eleanor, was severely injured, one man killed, and another man injured.

The Lessigs were returning from a visit to California when the accident occurred on a railroad overpass on Highway 97 approximately two miles north of Terrebonne.

The dead man is Gilbert G. Lopez of El Mirage, Arizona, driving an Oregon-licensed car in which he was attempting to pass a produce truck, when he ran head-on into Lessig's pickup camper. He then bounced into the truck, forcing it off the road and down an embankment where it overturned. The trucker's injuries were not serious.

Mrs. Lessig was the most severely injured, suffering multiple breaks to both legs. Complications necessitated amputation of her left leg, below the knee, the following Saturday. Their two-year old daughter, Maria Louise, was uninjured.

Mrs. Lessig is being cared for at St. Charles hospital in Bend, as her doctor believes it unsafe to move her yet.

Model 190 Series Qualified

BURGLAR STRIKES ES ED EMPLOYEE

Have you ever wondered what it would feel like to go home and find part of it missing? Ask Billie O'Dell, Engineering Department.

Billie says, "One thing I know; he'll be the best-dressed burglar in town." Ray, Billie's husband, doesn't have a stitch of clothing left, except the ones he had on his back. It's going to be a monotonous wardrobe this winter, isn't it, Mr. O'Dell?

Besides the clothing, all the linens, bedding, golf clubs and some tools were stolen.

A linen shower, given by the office girls, replaced a small portion of the loss. In one package someone thoughtfully included a few handkerchiefs for Ray. Ray wrote a "Thank You" to the "Mother Hubbard Linen Cupboard Replacement Girls." Our hearts were deeply touched when he wrote, "The hankies have been indeed helpful when I think about my golf clubs."

Billie offered this sage bit of advice, "Check your insurance. Make sure you're covered against theft. We thought we were."

Joint Effort Reaches Successful Completion

A long sought goal was reached last month when the 190 series relay, also known as the MS relay, completed and passed the qualification tests for MIL-R-6106E, and was accepted for the QPL. Approval became effective at 0800 hours on 23 September, 1964.

This qualification lets us into a totally new market. We have previously qualified units on MIL-R-5757D which govern relays in such things as radios, computers, and satellite telemetry systems. MIL-R-6106E governs relays, or power switches in the line, that turn on the above named equipment.

This MS relay is the first joint effort of the Electronics Division, Portland, and the parent Company at Los Angeles. The request to develop came from Corporate Headquarters, and the design and tests were completed here, a tribute to the related effort of all departments.

Major credit goes to Alex Lessig, who lived most closely with the project, and Jack Dodge, under the guidance of Van Huckabee in Relay Engineering.

NV3715A Gyro Starts Qual Tests

The first of three NV3715A gyros was delivered to the Q.C. Lab on October 7, 1964, to start tests which, when successfully completed, will qualify this gyro for acceptance under specification MIL-G-25597B (USAF), and naming to the Qualified Products List. This will make our Electronics Division eligible to bid on a procurement contract to supply 10,000 units to the Armed Forces over the next five years.

This gyro, designated the MD-1, is an attitude indicating gyro used in the autopilot system of many military aircraft.

Automation Received With Mixed Feelings

by Jackie Petty

It seems as though automation is slowly taking over everything. Even women, they tell me and, from what I've seen on TV, it's the answer to the male species wildest dreams. Just think --a woman built to their very own specifications who can be turned on and off just by the push of a button.

Yes, I can see it all now . . . a man coming home from a hard day at the office, dashes into the house and there is the answer to all his dreams waiting for him at the door. He rushes to take

off his hat and coat, presses a button and PRESTO his "Living Doll" in all her glory prepares his dinner, does the dishes while he gets into his slippers and picks up his pipe, which is laid out waiting for him, and relaxes in his easy chair; then she mixes his drink and lights his pipe for him. Man--this is the greatest!

Even if he wants a night out with the boys, all he has to do is turn her off, shove her in a closet and he is free! FREE! He doesn't have to come home until the wee hours if he doesn't want

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Automation—

Continued from page 1

to because mama is quietly at home in the closet with her power turned off! She won't drive his car, hang her nylons in the bathroom; she will talk only when you want her to and say only what you want to hear. She will be beautiful, sexy and glamorous at all times. No cold creams or curlers. This is the life for you? Well, let's take a woman's view of all this.

For instance, the man who is bringing the boss home to dinner. Before leaving in the morning, he dictates her orders for the day. Clean the house, press my suit, polish my shoes, do the marketing, check the liquor in the bar, and have dinner ready to serve at 7:00 o'clock. He goes happily off to work knowing that his "Living Doll" is doing exactly as he told her.

He arrives promptly at 7:00 o'clock with his guests, hurries to the kitchen and there she is!! Yes, there she is--this beautiful, glamorous, sexy creature in all her glory, peeling potatoes. There are potatoes in the sink, on the drainboards, potatoes all over the floor! He rushes to the phone, frantically dials a number and says, 'Get me an electrician and hurry! My wife has a short somewhere! Where? I don't know where! Yes, it's urgent. She was set to start peeling the potatoes at 6:00 o'clock and she's been peeling ever since! Yes, I'm standing knee deep in potatoes. Well, yes, I buy them by the 100 lb. sack! OK, so I ought to have my head examined! Get over here, will you?'

As for us gals? Well, we can take care of ourselves. Just give us a Hipot, a continuity checker, a screw driver, a soldering iron and we will keep her current flowing. In fact, we will even make her a new terminal board if she needs one. Oh, yes, fellows, with a good ohmmeter we can even tell you how much resistance she's got --for a sizeable fee, that is.

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Vital Statistics

NOVEMBER BIRTHDAYS

Paul Irish	November 2
Dolores McDonald	November 3
Frances Hahn	November 4
Emma Nelson	November 4
Pearl Edinger	November 6
Jean Kuhlman	November 6
Irene Mills	November 8
Jo Ann Thurston	November 8
Marvin Pedersen	November 9
Harold Walker	November 9
Alvina Renwick	November 11
Thelma Todd	November 11
Danny Yoder	November 11
Etta Caviness	November 12
Merle Triplett	November 12
Charlotte Vaughan	November 12
Ralph Green	November 13
Ray Noregaard	November 15
Louise Lind	November 16
Joe Kohler	November 18
Billie O'Dell	November 18
Anna Gordon	November 23
Lorraine Eiland	November 25
Rosalie Cornell	November 27
Honora Dallas	November 27
Irene Hamm	November 27
Vic Huffman	November 30

Frank Schommer sounds real pleased with his son, Eric Frank, born October 5, 7# 11 oz., 21" long, with lots of black hair. Eric has an 18 mond old sister at home.

Darla Stoffel is back at work, as are Helen Hartwell, Frances Hahn, Frances Seitz. Glad to see you back on the job again.

Sandra Cropley dropped in one lunch time with her baby girl, 3 months old and a blond cutie.

We wish lots of luck to the people on our sick list: Jeanne Barnett, Anne Reddon, Georgene Kovach, Jessie Haner, Annie Vineyard, and Isabelle Carn-cross. Jeanne will be back at work by the end of October and hope the rest of you are with us soon.

Helen Harker, Relay Department, quit the end of September to stay at home.

We have quite a list of new employees:

Spencer Lyons, Allen Costley, Godfrey Strake, gyro balancers, Gyro Department; Jan Oppertshauser, secretary, Sales Dept.; Opal Paukner, clerk, Sales Dept.; John Jensen, carpenter, hired temporarily to do some remodeling; Zelda Nelson and Esther Huber, Miniature Motor Dept.; Donna Johnson, Slip Ring Dept.; Dorothy Elsas-ser, Marjorie Zeeb, Marcia Stephenson, Coil Finishers, Dept. 78; Ellen Reid in M.O. Welding; Betty Trask,

The Poet's Corner

Honora Dallas stated flatly in last month's issue that she couldn't turn her talent on and off like a TV set, so if our paper is to come up with a poem every month, another guy will have to write the words and get the rhythm set.

So, with that goal in mind, and pen in hand, I thought that I would try and send a contribution to our Editor to help him fill that corner at some time when the talent of Honora lets her down.

PLEASE RUSH ONE GYRO!

When the schedule's tight on a prototype
And the project needs a start
Give me Thierman as the "steer" man
And Art to chase the parts.

Add Larry Ward on the drawing board,
At Katt to check the sketch.
While Dave will try his best to buy
Those items not invented yet.

Appoint Kohler as cop in the Model Shop
To guide priorities through,
And engineer dimensions where
The draftsman has forgotten to.

For electronic gear we'll have Jim Deer
Calculate the proper set,
While Louise will find a way to wind
The weirdest synchro yet.

For re-design we will use that fine
Team of Dennis, Ed and Draga:
When something's strange and needs a change
You can count on them to make it.

When we need a whiz on mechanism
We send for Orle Shirley.
Discussions still are raging o'er his caging
Methods: Sure, but squirrely.

Ideas abound, and some are sound,
And others good for naught;
But to the lab, where good or bad,
Harley Lyman checks them out.

While Lee and Larry, Bob and Harry,
Make assemblies left and right.
This team inventive, with good incentive,
Will deliver your prototype.

Potentiometer.

This really doesn't seem like the end of October and the only reason we can give is that we missed Nellie's "Nuts For Sale" ad. It is too bad the Zimmerman's are no longer in the walnut raising business.

Bill Parker's new son, Michael, was born August 30; joins 3 sisters and a brother at home.

Winners of the big World Series pools were: Willie McClain, \$50.00 and Doris St. Johns, \$100.00. Maybe it is good luck to work in the gyro department???

How Do Our Gyros Work?

By George Schroth

The question is often asked of the gyro assembly people. How do our gyros work? Our answer is "Fine!" But, sometimes, this answer isn't quite enough. The purpose of this is to give you some gyro operating principles, explain some common gyro terms. Let's hope it isn't a complicated explanation of an easy subject.

It all starts with a spinning wheel called the rotor or spin motor. This is mounted in a frame called gimbals. The frame has ball bearings between the base surface and the outer gimbal, also between the outer gimbal and the inner gimbal. The rotor is held in the inner gimbal by rotor bearings. Quite naturally these bearings are called gimbal bearings and must be as friction free as possible.

Now the principal advantage of our spinning wheel is that it is lazy. It wants to stay where it is in space. This means that if the base surface turns around the inner or outer gimbal axis, the gyro spin axis stays put. The spin axis, then, is stabilized in space. If some kind of angle measuring gadget (potentiometer, synchro, voltage pick-off, etc.) is used to measure the rotation of the base surface around the gimbals, we can then determine how far the base surface has moved from a stabilized reference line which is the gyro spin axis. If the base surface is attached to an airplane or missile and the stabilized reference line has been given some particular orientation, the angle measuring devices will tell us or anyone else who may be interested how far the vehicle has deviated from some predetermined position.

These pickoff signals can be used to actuate control circuitry so as to place the vehicle back in the proper position. The fact is, this is pretty much the way an autopilot works.

If the particular orientation we mentioned above is straight up and kept that way by means of some kind of plumb bob (pendulous reference), this gyro is then called a vertical gyro. If the stabilized reference is horizontal, the unit is called a directional gyro. The other class of gyros we have been describing so far are called free gyros. The free has no predetermined reference.

There are other type gyros such as the rate gyro and stable platform but, since we do not produce them here at ES, we will not go into them further. Even if you don't quite understand all of the foregoing information, it should

help you somewhat to answer the question, "How does a gyro work?". Actually, as the assembly people see it, it takes a lot of coordination, cooperation and hard work between engineering, management and all the piece part manufacturing departments to make our gyro work.

The gyro assembly departments have experienced employees from a few weeks up to 18 years seniority. The average is about 8 years.

With the Engineering Dept. working diligently on new models, we're looking ahead to a busy future.

Fringe Benefit

By Illomay Van Orsow

Donna and I sat eagerly at our typewriters; ready to start another day. Through the door walked John Foster. Yes, it was another test report--another deadline to meet.

On your mark! Get set! Go! We were off again.

Now don't get me wrong; our guys in Q. C. are a swell bunch to work for and with. When they smile sweetly and say, "Thanks girls for all your hard work and help," we gladly forgive them for the mountain of work they just put us through.

They are so welcome, those courteous little extras that can mean so much. Thanks fellas for being so swell.

During the World Series someone asked Jim Howard "Who won the game today?" Jim, who is an expert on such data and is also a former big leaguer, replied, "Brooklyn."

BLUES OF COIL DEPARTMENT

By Mae Kobs

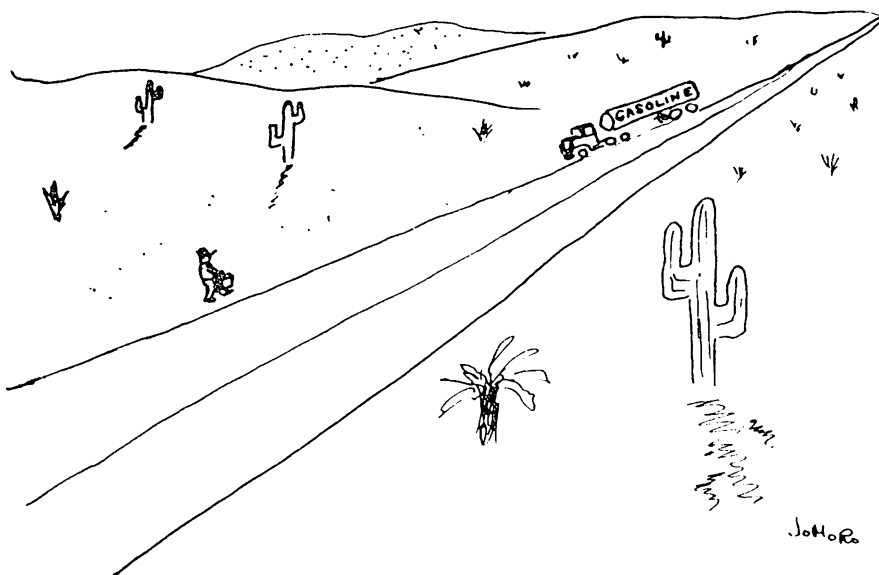
We know many of our fellow employees wondered how we could get along without our white coats and caps. Well, BLUE Day arrived and now you know what our secret was. We were being dyed blue. Perhaps for Blue Hawaii effect, or was it the blue-green fashion trend for fall that inspired the blue. I feel this was stronger because, as we all know, E.S. doesn't ever take a back seat to anyone, not even in fashion. The grapevine has it that soon we'll be seeing other colors in other departments, but we feel sure none will equal our blue coats -- green walls effect.

The Coil Department wishes to express our sincerest thanks for the lovely luncheon served us. Our greatest disappointment was that, due to uncontrollable factors, Mr. Gustlin was unable to attend the affair with us. However, Brit Kimball stepped up to the head table and did a fine job of answering questions. Do hope he enjoyed the occasion as much as we did.

As the month of witches and goblins comes to an end, we review the anxious moments of the World Series at lunch time, as well as the coverage given over the P.A. system. Some happy and some sad faces; remember, it's all in the game.

We are enjoying hearing about hunting stories. Kay Greenley boasts bringing home a three point, Doloris Rogers a forked horn or something like that, she says.

So, until turkey time, back to our coils.



EMPLOYEE OF THE MONTH— WALT MANNING

"C.Q.--CALLING THE NORTHWEST U.S.--C.Q.----" Walt Manning intercepted the call from the icebreaker "East Wind." Its crew aboard were young men from the Northwest, members of the U. S. Coast Guard en-route from the bleak, cold South Pole. These men had not talked to their wives for over six months. "Could you possibly make contact with these boys' wives?" pleaded the skipper. Walt could and did. Because Walt is a "ham" equipped with a setup that plugs into his telephone, he can relay the calls from his radio direct to the desired party. You can imagine the thrilling evening he spent as one by one Walt contacted each wife and asked, "Are you willing to accept charges from Portland to talk with your husband?" Every time there was a grateful "Would I?" Walt had the satisfaction of playing cupid to several lonesome couples, reuniting them temporarily, at least by voice. Two weeks later Walt received a letter from the skipper thanking him for his services.

Besides playing cupid, Walt sends emergency messages in times of disaster, reassures relatives far away, and just gets acquainted with people all over the world for his own pleasure. This is all possible because he is a "ham" radio operator. This hobby offers a warm, personal touch that many other hobbies lack. Walt has talked to approximately 250 countries since becoming a radio enthusiast. Some of these contacts have been by voice, some by morse code (the international code used by all radio "hams"), and some by teletype.

Some of the most interesting recent connections have been with bases in Antarctica -- Cape Halet, McMurdo Base, Eight's Base, and Scott Amundson Base, which is geographical south (meaning it's as south as you can get), are some of the bases Walt has visited via radio. These men have varying backgrounds. Many are on scientific excursions made up of varied nationalities. Some are boys sent by Uncle Sam, who has recognized the importance of the polar regions for military posts. But all these men have one thing in common--they are cut off from the world, lonesome, living for the most part underground, and a voice from home means a lot.

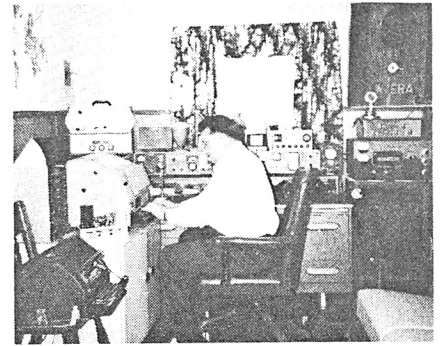
Walt has made contact behind the Iron Curtain. These calls are friendly calls, no politics. Russian calls are monitored; if a Russian operator gets carried away, jamming stations create

static and interference, making it impossible to complete the call. Most people of other countries speak some English, so the language barrier is not a serious problem.

Walt has contacted many friends and relatives overseas for several co-workers at ES. Joe Kohler recently talked with his brother, Tom, who is on the Island of Okinawa.

Walt and fellow "hams" have donated their time and equipment working with the Red Cross during disasters. Storms, floods, fires, tidal waves, earthquakes -- all these catastrophes render ordinary communication lines helpless. Most short-wave operators have emergency equipment that sees them through when other lines are down.

For those of you who are "hams," Walt's call letters are W7ERA. His equipment is a Collins 32S3 transmitter with a 30L1 linear amplifier, operating on 1 kw of D.C. power. The receiver is a 75S3; the antenna is a Telerex 3 element beam, 65 foot high, with radials buried one foot deep every 20 degrees in a 360 degree circle about the base.



Walt finds it a fascinating and rewarding hobby. There's no excuse for dull evenings at home when you can tune in any time with station WORLD.

Walt is a member of Q.C.W.A. (Quarter Century Wireless Association), which is comprised of members who have been "hams" for at least 25 years.

Walt has worked for Electronic Specialty Company for twenty years. Merle Triplett rates Walt one of his best Tool Makers. "He's a good, steady worker. Walt takes a great deal of pride in his work, turning out a very good finished product."

Although he has served in various departments, Walt says he has found his home in the Tool Room.

'Lost Treasure' Tale Stirs Interest Here

By Howard Little

Thirty years ago I was working for an electric company doing repairs and maintenance on lines running out of a little mining town called Coulterville. Coulterville is now a ghost town, but at that time it was populated with 8000 inhabitants, mostly men (the ones who spend their lifetime searching for the "big one" that will make them rich).

One night Mr. Thomas, the manager of the Jeffries Hotel where I was temporarily hanging my hat, filled me in on some interesting history of their town.

"During the time Fremont was winning California for the U.S., some Mexicans, who had long before discovered the "mother load" in this area, were quietly skimming the cream off the top of these rich veins of gold. A number of veins were exposed to the surface, and under the guidance of a Jesuit Priest, they followed these veins into the ground, gopher-hole fashion, using ladders and baskets, taking the rich gold-bearing rock and free gold on the top. Under the guidance of this man, who was Father, confessor, teacher, master, and all things to these men, much gold was accumulated. Periodically, usually

every three or four years, Spanish ships landed at Monterey. These ships were the only market for their gold. The Mexicans had a rich pay-load awaiting the next ship, when disaster forced them to flee California. Lawless bands of renegade whites stormed through California, plundering and massacring as they went. As these bands approached Coulterville, in desperation the Mexicans burdened fourteen mules with gold-filled saddlebags, and secretly buried what they could not carry, at a place where they could see the tunnel of the Josephine Mine, between two trees. They then fled to Mexico. Only one survivor of this original pack train returned to claim the buried treasure. About twenty-five years later, posing as a wood-chopper, he combed the area where he remembered the gold to be buried. After three futile years of searching, he could no longer bear the weight of the unfound gold; he shared his secret with the citizens of Coulterville, hoping that someone would uncover the wealth waiting for the right shovel, to find it. As far as we know, to this day, somewhere up in those hills, that gold still waits to be uncovered."

It's still waiting. Gold fever anyone? I can supply the map.